

REMARKS

New claims 39-40 are added. Claims 1-40 remain in the case. Claim 23 is amended to correct a typographical error. Reconsideration is respectfully requested.

Claims 1-3, 5, 8, 10-22, 26, 29-31, and 33 were rejected under 35 U.S.C. 102(e) as being anticipated by *Tanigawa et al.* ("Tanigawa" U.S. Patent No. 5,648,813). Applicant respectfully traverses this rejection in its entirety.

An embodiment of the present invention is drawn to a one-way communication system that provides interactivity to simulate two-way communications without increasing the load of the data receiving apparatus (Specification page 3 ll. 18-26). An example of one-way communication is a TV broadcast system (Specification page 3 ll. 24-25). An example of a two-way communication system is the Internet (Specification page 6 ll. 9-17). An embodiment of the present invention provides users with an interactive program which resembles "net surfing" on the Internet using only a TV broadcast wave that is repeatedly transmitted (Specification page 6 ll. 14-17 and page 8 line 22). The transmitting apparatus can convert HyperText Markup Language (HTML) documents on Internet web servers into a formatted package of background image data, control information, and supplementary design information that is then sent to a receiving apparatus (Specification page 6 ll. 11-17). The transmitting apparatus determines the characters and images in the HTML page that have a link to another image attached to them and generates supplementary design combining information and superimposes a supplementary design showing the attachment of a link to that other image at a position in the background image data (Specification page 7 ll. 13-23).

The supplementary design information can be a non-moving cursor for marking a position on the background for a link, or a title box for highlighting the title of the page at a particular position, for example (Specification page 6 ll. 18-22, page 7 ll. 1-5, and page 11 ll. 12-18). A user can view the representation of the web-page and select one of the available cursors to view the image associated with the selected cursor (Specification page 9 ll. 19-27). While the Internet servers have data transfer loads which change depending on the number of requests from a number of requestors, the transmitting apparatus of the present invention repeatedly transmits all of the image data according to a fixed cycle so the receiving apparatus will always be able to switch the image data within a fixed response time and the load on the receiving apparatus is not increased (Specification page 10 ll. 1-11). In this way, a one-way broadcasting of the web-page information is available for selection by the user by selecting a link associated with the associated cursor. The selected image is then switched for the current background image, and the new image similarly may have cursors identifying other image information available for selection by a user.

The Tanigawa reference teaches an optional interactive screen display for use with a remote control and a graphical-interactive-screen display apparatus that does not require an expensive user-interface-screen generation circuit (Tanigawa col. 1 ll. 7-9 and col. 4 ll. 7-12). An eighth embodiment of the Tanigawa invention includes a program transmitter and a program receiver for generating and displaying an interactive screen (IS) in a foreground window on a display device and controlling some aspect of the associated device through a remote control (Tanigawa Figures 63-65 and col. 36 line 33 to page 37 line 6, and col. 41 ll. 8-18).

Significantly, Tanigawa teaches that this interactive screen display is not graphically derived from the background image of the broadcast program. Instead, Tanigawa teaches the

interactive screen display is composed of basic objects that are assembled in a preplanned format (Tanigawa col. 2 ll. 38-42 and col. 37 ll. 7-11). Tanigawa teaches sending instructions in a data-structure-like format where the interactive screen attributes are declared including a description of the interactive screen panel shape and the so-called boxes or buttons for display within the panel that indicate options for a user to select (Tanigawa Figs. 51-52 and col. 37 ll. 13-36). The interactive screen generation unit then reads these instructions to generate the foreground panel that is superimposed on the existing broadcast program such as a cable TV (CATV) broadcast of a Quiz Show where the user can play along.

In one passage Tanigawa teaches:

As shown in FIG. 64, the display unit 5015 displays the interactive screen under the control of the IS generation unit 5014 by establishing a window 6402 in a screen 6401. The interactive screen in FIG. 63 is changed as shown in FIGS. 66 through 69 as the user pushes the "→" (right), "↓"(down)", "selection", "↓"(down) buttons successively on a remote controller 6501 as shown in FIG. 65 (Tanigawa col. 41 ll.15-25, emphasis added).

Tanigawa teaches a user interface "control panel" for a device that includes the creation of a foreground screen that is superimposed over an existing program like the TV program "quiz show" as described. Only the interactive screen (IS) portion of the display is updated based on the user actions, and a new background image is not created. Tanigawa teaches a signal separation unit that judges whether the signal from the signal receipt unit is a multiplex signal or not (Tanigawa col. 36 ll. 61-62, emphasis added). If the signal does not include the interactive screen information, it is simply passed to the display unit and an interactive screen is not

generated (Tanigawa col. 36 ll. 63-67). This follows logically as well since not every type of program broadcast over cable TV, for example, may be adaptable to an interactive session with a user, and the foreground window showing interactive choices to a user would unnecessarily obscure the viewing of the broadcast program. Further, one can easily imagine a user not electing to take advantage of an interactive program that is available. For these reasons, it is clear the foreground display of the interactive screen is optional. This is a significant difference since it illustrates that Tanigawa is not teaching the creation of a background image as claimed, but rather an optional, supplemental image for placement in the foreground over an actively displayed program, such as a cable TV program. It is clear, then, that the interactive screen is not the main image data, but is a window overlaying the existing background image of the main broadcast program. In contrast, the present invention as claimed, includes the generation of a background image with overlaid links to other background images for selection by a user. Once a link is selected, the new background image associated with the link is swapped for, or replaces, the previous background image (Specification page 5 ll. 13-15, page 9 ll. 23-24, page 10 ll. 8-11, and page 13 ll. 20-22).

Independent Claim 1 is drawn to an embodiment of the communication system including a transmitting and receiving apparatus. According to Claim 1, the storing means stores a background image that is main image data to be displayed by the receiving apparatus. This background image is changed when a link is selected and a new background image is selected. Conversely, Tanigawa teaches that the interactive display screen in the foreground is superimposed on top of a background display, and only the interactive display screen is changed based on the user's input. The Office Action asserts that Tanigawa teaches "storing a background image that is main image data to be displayed by the receiver apparatus and position

information that indicates a position within the background image" is anticipated by "interactive objects and position information of the interactive objects" (Detailed Action 2, emphasis added). Applicant respectfully traverses this assertion since the interactive objects taught by Tanigawa only refer to objects within the interactive screen, and does not store a background image. Hence, Tanigawa cannot anticipate this element of the claimed structure.

Claim 1 further recites "combining the separated background image and the read supplementary design at a position in the background image indicated by the separated position information to generate image data". Applicant respectfully submits that Tanigawa does not teach this structure either since the interactive screen is generated first from primitive elements and then superimposed upon the broadcast program at the display unit (Tanigawa Fig. 50). The interactive screen display is not graphically derived from the background image of the broadcast program. Conversely, Claim 1 recites the display image is generated from the background image and the supplementary designs (cursors) placed at the indicated positions prior to sending to the display unit. Claims 2-3 are believed to be allowable based on their dependence from independent Claim 1.

Finally, Tanigawa teaches that the start position and end position for the interactive screen is not determined from a background image (Tanigawa Figs. 64, 70-72, and col. 42 ll. 26-67). Specifically, Tanigawa teaches the "IS generation unit 5014 generates the interactive screen using the objects stored in the display object storage unit 5013 based on the IS structure specification data signal (S7014)" (Tanigawa col. 42 ll. 9-12). The panel information buffer retains the previously stored start and end positions, which further illustrates the foreground panel position cannot be a function of the main or background image data (Tanigawa col. 39 ll. 42-45 and col. 40 ll. 19-21). The fact that this panel information is stored in the local panel

information buffer also indicates the location information is not repeatedly transmitted since to do so would be unnecessary.

Independent Claim 5 is drawn to an embodiment of the communication system including a transmitting and receiving apparatus. Claim 5 recites "a link from one background image to another background image". Applicant respectfully submits that this structure is not taught by the Tanigawa reference since the reference actually teaches creating a foreground window for displaying graphics that do not include the background image, as discussed in reference to Claim 1. Further, Claim 5 recites "a combining of at least one supplementary design with a background image". Even assuming *arguendo* that the supplementary designs are equivalent to the display objects of the cited reference, applicant respectfully submits that the structure cannot be taught by the cited reference since the supplementary design is actually combined with the background image to create a new image that is reproduced as the main image data. In the case of the Tanigawa reference, the control panel window is superimposed over main image data which can be a cable TV program, for example. The Office Action suggests that the "link France to Germany" anticipates the link to a separate background image. Applicant respectfully disagrees with this suggestion since the links "France" and "Germany" represent responses from a user, and selecting one of these links cannot cause the switching of the present background image with a new background image, for example.

Independent Claim 8 is drawn to an embodiment of the transmitting apparatus. Claim 8 recites a "storing means for storing a background image that is main image data to be displayed by a receiving apparatus and position information that indicates a position within the background image". Applicant respectfully submits that this structure is not taught by the Tanigawa reference since the foreground control panel window taught by the reference does not include a

background image, but is a collection of primitive elements on a palate, as discussed above (Tanigawa Figs. 51-52 and col. 38 ll. 14-43). This window is not based on a background image acquired from an image source, but is simply a collection of elements arranged according to the predetermined program. Regarding Claims 9-14, applicant submits that the palate object elements have attributes including location, dimension, coloration, and other aspects, but that these attributes are not relevant since these elements are used as primitives within the foreground palate, and not for constructing a new main image from the background image as claimed. Claims 9-14 are believed allowable based on their dependence from Claim 8.

Independent Claim 15 is drawn to an embodiment of the transmitting apparatus, and is believed allowable based on the arguments in reference to Claims 1 and 5 above.

Independent Claim 16 is drawn to an embodiment of the receiving apparatus. Claim 16 recites a "combining means for combining the separated background image and the read supplementary design at the position in the background image". Applicant respectfully submits that this structure is not taught by the Tanigawa reference since, it must be assumed, the background image of the reference can only be the main display program such as a the cable TV program, which necessarily includes adding the display objects to the background image, which cannot be done since the signal flow in the diagrams does not permit this sort of combining (Tanigawa Fig. 50). Further, Applicant respectfully submits that the display unit 5015 cannot inherently include a combining means as claimed since Tanigawa teaches the combining of the primitive elements of the interactive screen (IS) is done separately, and then the palate window is superimposed in the foreground over the broadcast program, as discussed above. Applicant submits the foreground image as taught by Tanigawa is not based on a background image received from the data transmitting apparatus as claimed, but is based on the construction of a

foreground palate from primitive elements and is independent from the background image, as discussed in reference to Claim 1 above. Claims 17-22 are believed allowable based on their dependence from independent Claim 16.

Independent Claim 26 is drawn to an embodiment of the receiving apparatus and is believed allowable based on the arguments regarding Claims 1 and 16 above.

Independent Claim 29 is drawn to an embodiment of the method of transmitting and is believed allowable based on the arguments for Claims 8 and 15 above.

Similarly, independent Claim 30 is drawn to an embodiment of the method of transmitting and is believed allowable based on the arguments for Claims 8 and 15 above.

Independent Claim 31 is drawn to an embodiment of the method of receiving and is believed allowable based on the arguments for Claims 1 and 16 above.

Similarly, independent Claim 33 is drawn to an embodiment of the method of receiving and is believed allowable based on the arguments for Claims 1 and 16 above.

Applicant respectfully requests this rejection be withdrawn.

Claims 4, 6, 7, 9, 23-25, 27-28, 32, and 34-38 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tanigawa. Applicant respectfully traverses this rejection in its entirety.

Independent Claim 4 recites "the supplementary designs including at least one cursor image". The Office Action takes Official Notice that "using a cursor image is well known in the art ... in order to indicate the movement on the screen". Applicant respectfully submits that the claimed cursor does not indicate movement on the screen, but rather is not moveable. As described and claimed, the cursor of the present invention is placed at the position defined in the "position in the background image indicated by the separated position information to generate

image data" as described near the end of Claim 4. Applicant respectfully submits that a person of ordinary skill in the relevant art would not expect the links indicated by the cursor markers to move. Finally, the cursor of Claim 4 is combined with the background image and is believed to be allowable based on the arguments for Claim 1 above.

Regarding Claim 6, applicant submits that the cursor does not move as discussed in reference to Claim 4 and is believed allowable based on the arguments for Claims 1 and 4 above.

Regarding Claim 7, as amended, appears to not correspond with the stated reason of the rejection, and applicant respectfully requests clarification. Further, applicant respectfully submits that the claimed "second storing means for storing the generated image data and the separated set of control information" is not taught or implied in the Tanigawa reference.

Regarding Claim 9, the Office Action states that the "generating means for generating a background image (objects of the interactive screen) based on the character information" does not correspond to the teaching of the present application since the interactive screen does not itself correspond with a background image or a broadcast program as discussed above and is believed allowable base on the arguments for Claim 8 above.

Regarding Claims 23-25, applicant respectfully submits that the "separating means for separating the background image and the position information" is neither taught nor implied in the cited reference since the panel window is not based on a background image as discussed above. Claims 23-25 are believe allowable based on the arguments for Claims 1, 4 and 16 above.

Similarly, Claims 27-28 and 32 are believed allowable based on the arguments for Claims 1, 4, and 16 above.

Regarding Claims 34-38, applicant respectfully submits the novel features as claimed are not obvious as described, and that the embodiment of the present invention in the recited modes are unobvious based on the arguments for Claims 16, 23, 26, 27, and 28 above which differentiates the present invention from the cited reference.

The Tanigawa reference does not teach the elements of the presently claimed invention, nor does it teach their function in combination with what is known to a person of ordinary skill in the relevant art at the time of invention. Hence, Tanigawa cannot render the present invention unpatentable. Applicant respectfully requests this rejection be withdrawn.

New Claims 39-40 are believed allowable since the references of record in this case neither teach nor suggest all the method steps or the result of obtaining information from a bidirectional communication system and presenting that information over a one-way communication system (Specification page 3 ll. 22-26 page 6 ll. 11-17).

It is believed that the case is now in condition for allowance, and an early notification of the same is requested. If the Examiner believes that a telephone interview will help further the prosecution of this case, he is respectfully requested to contact the undersigned attorney at the listed telephone number.

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